

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-130. (Cancelled)

131. (Currently amended) A data output content service system for rendering₁ at an output device₁ output content managed from an₁ information apparatus and for ensuring security of the output content, the system having

one or more servers for generating device dependent output data corresponding to the output content with a compression operation and an encryption operation, the device dependent output data being device specific acceptable for rendering at the output device, ~~the information apparatus being distinct and separate from the output device, and~~

the one or more servers being distinct and separate from the information apparatus and the output device, the system comprising:

means for receiving from the information apparatus₁ ~~[[at]]~~ by the one or more servers₁ ~~[[a]]~~ security or authentication information associated with the user operating the information apparatus for authentication of the user, and₁ in dependence of ~~[[a]]~~ successful authentication of the user, enabling the user access to the data output content service provided by the one or more servers;

means for receiving from the information apparatus, by the one or more servers, payment or subscription information for accessing the data output content service provided by the one or more servers;

means for receiving₁ at the one or more servers₁ a document object from the information apparatus over a network, the document object relating to the output content and including a pointer or reference to the output content;

means for receiving₁ at the one or more servers₁ an output device object from the information apparatus over a network, the output device object having one or more attributes corresponding to the output device, and including an indication of a language and or data format that is acceptable as input to identification information related to the output device for rendering;

means for generating the device dependent output data at the server with a server application, including;

means for applying a compression operation on the output content, and

means for applying an encryption scheme for ensuring security of the device dependent output data that is device specific for rendering,

the generated ~~the~~ device dependent output data ~~being associated with~~ corresponding to the output content and being related₁ at least in part₁ to the ~~indication of a language or a data format~~ identification information related to the output device included in the output device object and received from the information apparatus over the network; and

means for transmitting, by the one or more servers, the generated device dependent output data to the information apparatus for rendering of the output content at the output device; and

means for delivering, by the information apparatus, at least part of the generated device dependent output data received at the information apparatus from the one or more servers, to the output device for rendering the output content.

132. (Currently amended) The system of claim 131 further comprising

means for providing by a client application over a graphical user interface at the information apparatus, one or more pointers or references to the output content for selection of the output content; and

means for receiving, by the client application, a selected output content over the graphical user interface for rendering from among the one or more pointers or references to the output content; and

means for generating, by the client application, a document object that includes a pointer or reference to the selected output content. ~~means for obtaining payment information from the information apparatus as payment for the data output service provided at the output device or as payment for sending the output data from the server.~~

133. (Currently amended) The system of claim 131 further comprising means for receiving, from the information apparatus, one or more job objects having one or more attributes corresponding to an the-output job, including one or more of an output quality, instructions, a preference, and a pointer or reference to another job object.

134. (Currently amended) The system of claim 131 in which the output device object includes a pointer or a reference to the identification information related to the output device language or the data format.

135. (Currently amended) The system of claim 131 in which the output device includes a display output control unit for displaying data the output content.

136. (Currently amended) The system of claim 131 in which the output device is a printer and the device dependent output data includes one or more of [[an]] image data, [[a]] graphics data, and text data.

137. (Currently amended) The system of claim 131 in which the information apparatus is a wireless information apparatus and includes one or more of a palmtop computer, a handheld computer, a laptop computer, a personal digital assistant ~~assistance~~(PDA), a smart phone, a screen phone, an Internet pad, an Internet ~~internet~~-appliance, and a digital camera.

138. (Currently amended) The system of claim ~~132~~ 131 in which the payment or subscription information is provided automatically by the information apparatus.

139. (Currently amended) The system of claim ~~132~~ 131 in which the payment information is provided through the information apparatus as entered by a user in response to a prompt to enter payment information.

140. (Currently amended) The system of claim 131 ~~132~~ in which the payment information includes service subscriber information corresponding to a pre-arranged subscription to a ~~the~~ data output service system.

141. (Currently amended) The system of claim 140 further comprising correlating the ~~data output~~ service subscriber information with a subscriber database that stores subscriber profiles with subscription payment information.

142. (Currently amended) The system of claim 131 in which the output device includes a television ~~further comprising obtaining authentication information from the information apparatus to authenticate permission for the information apparatus to access the data output service.~~

143. (Previously presented) The system of claim 131 further comprising means for establishing a communication channel between the information apparatus and the server application, the communication channel including one or more of an Internet, a local area network, a cellular network, and a wide area network.

144. (Currently amended) The system of claim 131 in which the output device is an audio output device and the device dependent output data includes audio data.

145. (Currently amended) The system of claim 131 in which the output device is a display device and the device dependent output data includes one or more of [[an]] image data, [[an]] audio data, and [[a]]video data.

146. (Currently amended) The system of claim 131 in which the output device decodes and decompresses the device dependent output data for rendering the output content ~~document object includes a reference or pointer related to the data content.~~

147. (Previously presented) The system of claim 131 in which the means for generating device dependent output data at the server includes one or more of invoking, launching, calling, utilizing, and involving one or more applications.

148. (Currently amended) A method for generating [[a]] device dependent output data acceptable for rendering at an output device, the device dependent output data corresponding to ~~output~~ digital content accessible₁ at least partly₁ by an₁ information apparatus, the method comprising:

sending₁ from the information apparatus to a server over a network, [[a]]security or authentication information associated with the user operating the information apparatus for authentication of the user, the server being distinct and separate from the information apparatus and the output device, and in dependence of [[a]]successful

authentication of the user, enabling the user access to a [[the]] data output service provided by the server;

sending, from the information apparatus to the server, payment or subscription information for accessing the data output service provided by the server;

delivering, from the information apparatus, at least part of a document object and at least part of an output device object to the server over a network, the document object being associated with the ~~output~~ digital content including a pointer or reference to the digital content, and the output device object including identification information related to an indication of a language and or data format that is acceptable to the output device for rendering;

receiving, at the information apparatus, from the server, device dependent output data related, at least in part, to the indication of a language or a format identification information included in the output device object delivered from the information apparatus, and the device dependent output data further including an encryption scheme that includes security keys for ensuring security of the device dependent output data that is device specific for rendering at the output device;

decompressing, at the information apparatus, the device dependent output data received from the server; and

delivering the device dependent output data from the information apparatus to the output device for rendering of the ~~output~~ digital content.

149. (Currently amended) The method of claim 148 further comprising establishing a communication channel between the information apparatus and the output device; and

receiving₁ at the information apparatus₁ ~~over the communication channel~~ one or more attributes corresponding to the output device over the communication channel.

150. (Previously presented) The method of claim 148 in which the server includes a computing device in a network and the network includes one or more of an Internet, a local area network, a cellular network, and a wide area network.

151. (Currently amended) The method of claim 148 in which the output device includes one or more of a display device, a projection device, a printing device, and ~~or~~ an audio output device.

152. (Currently amended) The method of claim 148 further comprising discovering an ~~the selected~~ output device as one of one or more output devices that are discovered by the information apparatus as being available for rendering the output content.

153. (Currently amended) The method of claim 148 further comprising decoding and decompressing the device dependent output data at the information apparatus subsequent to receiving the device dependent output data ~~in which the document object includes the output content~~.

154. (Currently amended) The method of claim 148 further comprising providing, by a client application over a graphical user interface at the information apparatus, one or more pointers or references to digital content for selection; and

receiving, by the client application, a selected digital content over the graphical user interface from among the one or more pointers or references to digital content; and
generating, by the client application, a document object that includes a pointer or reference to the selected digital content. ~~in which the document object includes a pointer or reference related to the output content.~~

155. (Currently amended) The method of claim 148 in which the server obtains the output digital content based on a the pointer or reference to the output digital content included in the document object.

156. (Currently amended) The method of claim 148 in which the information apparatus is a wireless mobile information apparatus and the wireless mobile information apparatus includes one or more of a palmtop computer, a handheld computer, a laptop computer, a personal digital assistant ~~assistance~~(PDA), a smart phone, a screen phone, an Internet phone, an Internet pad, an Internet ~~internet~~ appliance, and a digital camera.

157. (Currently amended) A method for generating device dependent output data acceptable for rendering at each of one or more selected output devices, the device dependent output data for each selected output device corresponding to ~~an output~~ digital content accessible, at least partly, by an information apparatus, the method comprising:

establishing a communication channel between the information apparatus and the one or more selected output devices;

receiving at the information apparatus over the communication channel one or more attributes corresponding to the one or more selected output devices;

~~selecting at the information apparatus one or more output devices for rendering the output content;~~

delivering₁ from the information apparatus₁ at least partially a document object and one or more output device objects to one or more servers over a network, the one or more servers being distinct and separate from the information apparatus and the one or more selected output devices, the document object being associated with the output digital content, and the one or more output device objects having one or more attributes corresponding to each of the one or more selected output devices, including an ~~indication of a language and or data format that is acceptable to~~ the one or more attributes corresponding to each selected output device for rendering, the one or more attributes received at the information apparatus over the communication channel from the one or more selected output devices;

sending₁ from the information apparatus to the one or more servers over a network, ~~[[a]]~~ security or authentication information associated with a ~~[[the]]~~ user operating the information apparatus, and₁ in dependence of a successful authentication of the user, enabling the user access to a ~~[[the]]~~ data output service; and

receiving₁ from the one or more servers₁ device dependent output data corresponding to the data content, the device dependent output data further being related₁ at least in part₁ to the one or more attributes corresponding to the one or more selected output devices ~~indication of a language or a data format included in the one or more output device objects delivered from the information apparatus~~ to the one or more

servers over the network, and the device dependent output data further including an encryption scheme that includes security keys for ensuring security of the device dependent output data that is device specific to the one or more selected output devices for rendering.

158. (Previously presented) The method of claim 157 in which the one or more servers are connected to a computer network that includes the Internet.

159. (Currently amended) The method of claim 157 in which the information apparatus is a wireless mobile information apparatus that includes one or more of a palmtop computer, a handheld computer, a laptop computer, a personal digital assistance (PDA), a smart phone, a screen phone, an Internet pad, an Internet ~~internet~~-appliance, and a digital camera.

160. (Previously presented) The method of claim 157 further comprising sending payment information from the information apparatus to the one or more servers over the network as payment for the data output service.

161. (Currently amended) The method of claim 157 further comprising discovering₁ with the information apparatus₁ one or more output devices as being available for rendering the ~~output~~ digital content.

162. (Currently amended) The method of claim 157 in which the document object includes the ~~output~~ digital content.

163. (Currently amended) The method of claim 157 in which the document object includes a pointer or reference related to the ~~output~~ digital content.

164. (Currently amended) The method of claim 157 in which the one or more servers obtain ~~output~~ digital content based on the pointer or reference to the ~~output~~ digital content included in the document object.

165. (Currently amended) The method of claim 157 further comprising delivering the device dependent output data to each selected output device for rendering of the ~~output~~ digital content.

166. (Currently amended) The method of claim 157 further comprising decoding and decompressing the device dependent output data at the information apparatus ~~sending from the information apparatus the device dependent output data for rendering at each selected output device.~~

167. (Currently amended) A data output security method for rendering output data corresponding to ~~the output~~ digital content at an output system, the output system includes with an information apparatus for receiving device dependent output data from one or more servers over a network, an output controller for decoding device dependent

output data, and an output device for rendering device dependent output data, the output system comprising:

establishing a communication channel between the ~~information apparatus~~ output system and one or more servers over a network;

providing, by a client application over a graphical user interface at the output system, one or more pointers or references to the digital content for selection; and

receiving, by the client application, a selected digital content over the graphical user interface for rendering from among the one or more pointers or references to digital content; and

generating, by the client application, a document object that includes a pointer or reference to the selected digital content;

delivering, from the ~~information apparatus~~ output system, at least part of a document object and at least part of an output device object to the one or more servers, the one or more servers being distinct and separate from the ~~information apparatus and the output system~~ device, the document object including a pointer or reference to the output digital content for the one or more servers to retrieve the data content from a content server with the pointer or reference, and the output device object including at least ~~[[an]]~~ identification information related to ~~indication related to a form or format that is acceptable for rendering at a selected~~ the output system device;

sending, from the ~~information apparatus~~ output system to the one or more servers over a network, ~~[[a]]~~ security or authentication information associated with the user operating the ~~information apparatus~~ output system for authentication of the user;

sending, from the output system to the one or more servers, payment or subscription information for accessing the data output service provided by the one or more servers;

receiving, at the output system ~~information apparatus,~~ device dependent output data from the one or more servers, the device dependent output data corresponding to the ~~output~~ digital content and being related, at least in part, to the identification information related to the output system included in the output device object delivered from the output system to the one or more servers over the network, and the device dependent output data further including an encryption scheme that includes security keys for ensuring security of the device dependent output data that is device specific indication of a form or format that is acceptable to the selected output ~~system device~~ for rendering;

passing the device dependent output data from the information apparatus to the output controller included in the output system;

decoding the device dependent output data at the output controller included in the output system;

decompressing the device dependent output data at the output controller included in the output system;

delivering the device dependent or device specific output data from the ~~mobile information apparatus~~ output controller to the ~~selected~~ output device included in the output system for rendering the ~~output~~ digital content.

168. (Currently amended) The method of claim 167 further comprising obtaining an output device object at the information apparatus, the obtaining of the output device object including one or more of obtaining information from ~~[[a]]~~ user input, from a communication with ~~an the selected~~ output device, and ~~[[or]]~~ from a default parameter or preference associated with the output system.

169. (Currently amended) The method of claim 167 further comprising discovering an ~~the selected~~ output device as one of one or more output devices that are discovered by the information apparatus as being available for rendering the ~~output~~ digital content.

170. (Currently amended) The method of claim 167 in which the output device is associated with the information apparatus and includes a direct wire connected between the information apparatus and the ~~further comprising selecting an output device compatible for receiving the output data~~.

171. (Currently amended) The method of claim 167 further comprising conforming₁ at the information apparatus₁ the device dependent output data into a form, format or language more suitable for rendering at an ~~the selected~~ output device, the conforming including a decoding operation and an encoding operation.

172. (Currently amended) A system for generating a device dependent output data acceptable for rendering at an output device, the device dependent output data

corresponding to ~~output~~ digital content accessible, at least partly, by an information apparatus, comprising:

a server that is distinct and separate from the information apparatus and the output device, the server being operable to receive a document object and at least part of an output device object, the document object being associated with the ~~output~~ digital content and the output device object having one or more attributes corresponding to the output device, including identification information related to ~~an indication of a language and or data format that is acceptable to the output device for rendering the output content,~~ the server being further operable to receive, from the information apparatus, ~~[[a]]~~ security or authentication information associated with the user operating the information apparatus for authentication of the user, and the server being operable to receive from the information apparatus payment or subscription information for sending output data corresponding to the digital content to the information apparatus;

a server application on the server for receiving the document object and the at least part of an ~~[[the]]~~ output device object and for generating the device dependent output data related, at least in part, to the identification information related to output device ~~indication of a language or a data format included in the output device object received from information apparatus,~~ the generating of the device dependent output data includes (1) applying a compression operation on the digital content, and (2) applying an encryption scheme with one or more security keys for ensuring security of the device dependent output data that is device specific for rendering; and

means for delivering, by the server, the device dependent output data to the output device for rendering of the ~~output~~ digital content.

173. (Currently amended) The system of claim 172 further comprising means for establishing a communication channel between the information apparatus and the server application by the server application, and the communication channel including one or more of an Internet, a local area network, a cellular network, and a wide area network.

174. (Currently amended) The system of claim 172 in which the output device includes an audio output device and the device dependent output data includes audio data.

175. (Currently amended) The system of claim 172 in which the output device includes a display device and the device dependent output data includes one or more of an image data, an audio data, and a video data.

176. (Currently amended) The system of claim 172 in which the output device includes a printing device and the device dependent output data includes one or more of ~~[[an]]~~ image data, ~~[[a]]~~graphics data, and ~~[[a]]~~text data.

177. (Currently amended) A system for generating device dependent output data acceptable for rendering at each of one or more ~~selected~~ output devices, the device dependent output data for each ~~selected~~ output device corresponding to ~~an output~~ digital content accessible, at least partly, by an information apparatus, the system comprising:

a server that is accessible by the information apparatus over a network and is distinct and separate from the information apparatus and the one or more ~~selected~~ output devices, the server being operable for receiving₁ from the information apparatus₁ one or more document objects and one or more output device objects, the one or more document objects being associated with the ~~output~~ digital content and the one or more output device objects having one or more attributes corresponding to the one or more ~~selected~~ output devices, including an identification information related ~~indication of a language and or data format that is acceptable~~ to the one or more output devices for rendering;

means for establishing₁ by the server, a communication channel between the server and the information apparatus at least in part over an Internet;

means for receiving₁ by the server and ~~at the server~~ from the information apparatus₁ [[a]]security or authentication information associated with a ~~[[the]]~~ user operating the information apparatus for authentication of the user;

means for receiving, by the server and from the information apparatus, payment or subscription information for accessing a digital content service provided by the server;

means for retrieving, by the server, the digital content from a content server employing the one or more document objects received from the information apparatus;
and

a server application operating at the server for generating device dependent output data associated with each of the corresponding one or more ~~selected~~ output devices, the device dependent output data being related₁ at least in part₁ to the

identification information related to the one or more output devices ~~indication of a language or a data format~~ included in the output device object received from the information apparatus, the server application being configured to apply a compression operation on the digital content for generating the device dependent output data, and to apply an encryption scheme for ensuring security of the device dependent output data that is device specific for rendering at the one or more output devices; and

means for delivering, by the server, the device dependent output data to the information apparatus over the communication channel in response to receiving the security or authentication information, the payment or subscription information, the one or more document objects, and the one or more output device objects from the information apparatus.

178. (Currently amended) The system of claim 177 further comprising means for delivering, by the server, the device dependent output data from the information apparatus to the one or more ~~selected~~ output devices for rendering of the ~~output~~ digital content.

179. (Currently amended) The system of claim 177 in which each output device of the one or more output devices includes one of a display device and an audio output device, and the device dependent output data includes ~~including~~ audio data.

180. (Currently amended) In a computer memory, client software operable from a information apparatus for generating device dependent output data acceptable for

rendering at an ~~selected~~ output device associated with the information apparatus, the device dependent output data corresponding to ~~output~~ digital content accessible, at least partly, by the information apparatus, the computer memory comprising:

client software executable at the information apparatus for providing over a graphical user interface at the information apparatus, one or more pointers or references to the digital content for selection; and

client software executable at the information apparatus for receiving a selected digital content over the graphical user interface from among the one or more pointers or references to the digital content; and

client software executable at the information apparatus for generating a document object that includes a pointer or reference to the selected digital content

client software executable at the information apparatus for delivering, from the information apparatus, at least part of a the document object and at least part of an output device object to a server that is distinct and separate from the information apparatus and the output device, the document object being associated with the ~~output~~ digital content and the output device object having one or more device dependent attributes corresponding to the ~~selected~~ output device and including identification information related ~~an indication of a language or a data format that is acceptable to the~~ output device ~~for rendering~~, the document object and the output device object being required at the server for generating device dependent output data corresponding to the ~~output~~ digital content and acceptable for rendering at the ~~selected~~ output device;

client software executable at the information apparatus for sending, from the information apparatus to the server over a network, ~~[[a]]~~ security or authentication

information associated the user operating the information apparatus for authentication of the user;

client software executable at the information apparatus for receiving, at the information apparatus, the device dependent output data for rendering at the ~~selected~~ output device, the device dependent output data corresponding to the digital content and being related, at least in part, to the identification information related to the output device included in the output device object delivered from the information apparatus to the one or more servers over the network, and the device dependent output data further including an encryption scheme that includes security keys for ensuring security of the device dependent output data that is device specific to the output device for rendering; and

client software executable at the information apparatus for decoding the device dependent output data received from the server;

client software executable at the information apparatus for decompressing the device dependent output data received from the server;

client software executable at the information apparatus for encoding the device dependent output data into a format or language acceptable for delivering to the output device;

client software executable at the information apparatus for delivering the encoded device dependent output data from the ~~mobile~~ information apparatus to the ~~selected~~ output device for rendering or output of the output digital content.

181. (Currently amended) The computer memory of claim 180 further comprising software executable at the information apparatus for establishing a communication channel between the information apparatus and the ~~one or more~~ output devices.

182. (Currently amended) The computer memory of claim 180 further comprising software executable at the information apparatus for establishing a communication channel between the information apparatus and the server, the communication channel including one or more of an Internet, a local area network, a cellular network, and a wide area network.

183. (Currently amended) The computer memory of claim 180 in which the information apparatus is a wireless information apparatus and includes one or more of a palmtop computer, a handheld computer, a laptop computer, a personal digital assistance (PDA), a smart phone, a screen phone, an Internet pad, an Internet ~~internet~~ appliance, and a digital camera.

184. (Currently amended) The computer memory of claim 180 in which the output device is ~~being~~ one of a display device and an audio output device and the device dependent output data includes audio data.

185. (Currently amended) The computer memory of claim 180 in which the output device includes a printer, and the device dependent output data include one or more of [[an]] image data, [[a]] graphics data, and text data.

186. (Currently amended) The computer memory of claim 180 in which the output device includes a television ~~further comprising software for obtaining payment information at the information apparatus as payment for receiving the output data.~~

187. (Currently amended) The computer memory of claim 180 further comprising software executable at the information apparatus for sending, from the information apparatus to the server, payment or subscription information for accessing a digital content service provided by the server ~~181 in which the communication channel is a wireless communication channel and the computer memory further comprises software for discovering the one or more output devices over the wireless communication channel.~~

189. (Currently amended) The system of claim 177 in which the communication channel between the information apparatus and the one or more output devices includes a wireless communication channel.

190. (Currently amended) The system of claim 177 in which the one or more output devices includes a printing device and the device dependent output data includes one or more of ~~[[an]]~~ image data, ~~[[a]]~~ graphics data, and ~~[[a]]~~ text data.

191. (Currently amended) The system of claim 177 in which the one or more document objects includes a reference or pointer related to the data digital content.

192. (Currently amended) The system of claim 177 in which the one or more output device objects ~~further includes an~~ identification related to the one or more output devices, the identification including one or more of an output device brand, a model, a registration, and an IP address.

193 (Currently amended) The system of claim 172 in which the document object includes a reference or pointer related to the digital ~~data~~ content.

194. (Previously presented) The system of claim 172 further comprising means for retrieving data content employing the document object.

195. (Currently amended) The method of claim 167 in which the delivering the device dependent output data to the output device includes delivering the device dependent output data to an output controller connected to the output device ~~further comprising obtaining payment information at the information apparatus as payment for receiving the output data corresponding to the output content.~~

196. (Currently amended) The method of claim 167 in which the output device is an audio device or a display device ~~further comprising obtaining a document object at the information apparatus, including a user selecting at least a pointer or reference to a data content.~~

197. (Currently amended) The method of claim 167 in which the communication channel between the information apparatus and the one or more servers includes one or more of an Internet, a local area network, a cellular network, and a wide area network.

198. (Currently amended) The method of claim 167 in which the communication channel between the information apparatus and the one or more servers ~~selected~~ ~~output device~~ includes a wireless communication channel and the method further comprises discovering the ~~one or more~~ output device over the wireless communication channel.

199. (Currently amended) The method of claim 167 in which the information apparatus is a wireless information apparatus, and the wireless information apparatus includes one or more of a palmtop computer, a handheld computer, a laptop computer, a personal digital assistance(PDA), a smart phone, a screen phone, an Internet pad, an Internet ~~internet~~-appliance, and a digital camera.

200. (Currently amended) The method of claim 157 in which the communication channel includes a wireless communication channel, and the method further comprises discovering the one or more selected output devices over the wireless communication channel.